

Lecture 3

Symmetry in the Torah

We have in the past explained a number of times that the word for “symmetry” in the Torah is **חן**, as in the verse: **וַיִּנְחַם מִצָּא חֵן בְּעֵינֵי הוִי׳**, which is usually translated as “Noah found favor in God’s eyes.” Noah was the first symmetry physicist and he found favor in the eyes of God because he saw his own mirror image, meaning that if you take the mirror image of the name “Noah” in Hebrew (**נח**) you get the word *chen* (**חן**), which is the Hebrew word for symmetry.

Physical Symmetries

In modern science there are three basic symmetries. First let us explain what symmetry means in physics. It does not mean only what we mean when we speak of symmetry in art. In physics it means that if a system is changed in a certain way, but it still appears to be the same, then it exhibits symmetry under that change. For example, if you have a ball and you rotate the ball, the ball will still look the same, so the ball is said to be symmetric under rotation. So symmetry at its heart says that if it looks the same, it is the same. All types of symmetry, like rotational and angular, all follow this principle.

The three basic symmetries that modern science addresses are called CPT, which stands for Charge, Parity, and Time. As we will explain, the order is not correct, but this is the order in which it appears always in science. We will explain that time is the highest, then comes charge, and the lowest is parity. They correspond to the three levels of the *sefirot* and the soul: the intellect, the emotions, and the behaviorist elements. In terms of the *sefirot*, these three levels are termed by three acronyms: *chabad* (which stands for the initials of the Hebrew words for wisdom, understanding, and knowledge, the intellectual faculties), *chagat* (which stands for the initials of the Hebrew words for loving-kindness, might, and beauty, the emotional faculties), and *nehi* (which stands for the initials of the Hebrew words for victory, acknowledgment, and foundation, the behaviorist faculties).

Parity, Charge, and Time

Parity is that if you look in the world in a mirror you will see the same thing. So the mirror image being the same means that the world is equivalent under a parity transformation. This means that left and right can be interchanged.

Symmetry of charge means that if you change every electrical charge in the universe to its opposite, you would still have the same universe. Once more, symmetry means that if you change something and it appears to be the same, then it is essentially the same. If you change the charge of every electron into a positron and every positron into an electron, then in essence you have changed nothing, because everything appears to still be the same.

Time symmetry is the most difficult for us to comprehend because it says that if I change time such that the future is the past and the past is the future, then nothing really has changed. This is the most counter-intuitive symmetry, because obviously the past is not the future and the future is not the past, so how can a change in the direction of time leave the universe the same. The easiest to understand is parity, the mirror image. Charge is a little more profound. But time symmetry is the most difficult to understand.

In the language of the sages, the description for all of these reversed realities (the universe after a certain symmetrical transformation) is: "I saw an upside-down world."¹⁵ What happens when you see the world backwards in some way? So time symmetry is the most difficult to imagine. So how do scientists explain this? They do so by using the concept of entropy.

The principle of entropy, the second law of thermodynamics, states that as time passes, everything is becoming more and more disordered. This is not just an objective experience; it is within the "psyche" of the universe itself. What this means is that under a time reversal (the past would now be the future and the future would now be the past, meaning that we would be headed forward into the past), I would still experience the future as the past, even though it is now my future. Therefore, nothing has changed, even if I change the direction of time. The universe still appears the same; the past even though it is now the future still appears to me as the past and the future, even though it is now my past will still appear as the future. All because of entropy. I can't say that I understand what this means, but let us believe that this is the case. This is time symmetry.

¹⁵. עולם הפוך ראיתי. *Pesachim* 50a, and elsewhere.

Gauge Symmetry

Now, general symmetry, which means changing something throughout the entire universe, is much easier to understand than if you change things only in a particular phenomenon and then look to see if there is a change in the rest of the universe. So, if I find a particular phenomenon within which I perform the change and still the universe stays the same, then this is considered a much more profound symmetry. This is called gauge symmetry and it is this type of symmetry that string theory is based on.

The most important example of gauge symmetry is in relation to the strong force, which keeps the nucleus of atoms, i.e., the protons and the neutrons in the nucleus, together. The elementary particle which acts as the messenger for the strong force is called the gluon. Gluons carry a charge that is designated in terms of a color anti-color pairing.¹⁶ The three "colors" in this description of the gluon's charge are red, green, and blue. Now, the particular gauge symmetry governing gluons states, that if all the reds turned into greens and vice versa, even though this is a change within only one of the four forces of the universe, nonetheless, the universe would remain exactly the same. This is different from taking the entire universe and placing it in front of a mirror and seeing nothing change. Therefore, this is considered more profound symmetry.

Symmetry Broken, Symmetry Complete

Up until several decades ago, each of these three symmetries was considered to be complete. Parity was complete, as was charge, as was time symmetry. Then came the surprising discovery that for the weak interaction, which is responsible for phenomena like radioactivity, right and left are not the same, meaning, that the symmetry of parity does not apply to the weak interaction (force).¹⁷ This is a great discovery because it turned over what was previously believed to be true about parity symmetry: that it is universally applicable. This is a beautiful example of how quantum mechanics breaks our intuition, which feels that there should really be no difference between right and left. It is totally counter-intuitive to us to say that there should be a difference between right and left, between looking at an

¹⁶. These colors have nothing to do with the physical colors we see with our eyes, they are just a nomenclature used by physicists to describe a particular property of some elementary particles, like gluons (and quarks).

¹⁷. Proposed in the 1950s by Yang and Lee and later verified by Wu. This is called the violation of parity conservation.

experiment directly or watching it through a mirror. Once more, there are four fundamental interactions in physics, the strong force, the weak force, the electromagnetic force, and gravity. Only in regard to the weak force, was it shown that parity conservation is violated.

So now we have set the ground work for understanding symmetry.

Parity and the Behavioral Sefirot

Now we would like to explain that parity symmetry (or conservation) corresponds to the behavioral aspects of the soul, which comprise the *sefirot* of victory (*netzach*), thanksgiving (*hod*), and foundation (*yesod*). Parity conservation specifically refers to the two *sefirot* of victory and thanksgiving, which are considered in Kabbalah to be two sides of one coin.¹⁸ They constitute the ability to take initiative to reach some goal (victory) and the perseverance to see that thing through until it is accomplished (thanksgiving). So they are the two sides of ones powers of action in the world, the "active powers" (*kochot ma'asiyim*) of the soul. They are considered so complimentary that sometimes (especially in the world of chaos) they are considered to be one and the same—one *sefirah*.¹⁹

The allusion in the Torah that clearly indicates that parity is related to victory (*netzach*) and thanksgiving is found in the Zohar in the expression: "he is in victory, she is in thanksgiving."²⁰ Once again, victory spiritually corresponds to the self-confidence needed to get up and take initiative and is relatively the male-side of the picture and thanksgiving (*hod*) spiritually corresponds to the strength to persevere in one's endeavor and carry it through, the relatively female-side of the picture. So at the level of action, these are the male and female principles in the soul.

The allusion to this is found in a beautiful allusion thing described in the Torah reading of *Vayakhel*. The last of the vessels described (which was also the first one used daily by the priests serving) in the Tabernacle was the wash basin, the **כִּיּוֹר** and its base. The basin was made of the mirrors of women.²¹ Halachically, a man is not permitted to look at himself in a

¹⁸. תרין פלגי גופא, literally, "two halves of a single body."

¹⁹. In the Arizal's writings it is explained that in the world of chaos victory and thanksgiving were just one *sefirah*, while in our world, in the world of rectification, they are two. See *Etz Chayim*, gate 8, chapter 4; compare to gate 9, chapter 2.

²⁰. איהו בנצח, איהי בהוד.

²¹. מראת הצבאת. Exodus 38:8.

mirror. A mirror is in essence a feminine object. What this means is that parity is in its essence a feminine principle.²²

The word describing these mirrors that were used to make the wash basin, "tzov'ot" (צבאת), literally means "hosts." *Rashi* explains this unique idiom. He explains that these were the mirrors used by the Jewish women in Egypt to beautify themselves even in the midst of slavery for their husbands. The men were very fatigued and had no strength to be with their wives and have relations with them because of their hard labor and this could have spelled the end of the Jewish people. The women had these special mirrors. When the husband came home late at night they would call him and say "Let's take a look at our faces in the mirror [see our mirror image] and see who is more beautiful." In this manner, by having the husband and the wife together look in the mirror, they would awaken and arouse their husbands. From this came out the 600,000 children that were finally redeemed from the severe servitude in Egypt, the hosts of God, the same children who then went on to receive the Torah at Mt. Sinai and began the entire Jewish history. It is said that because mirrors are used to arouse the evil inclination with the desires of the flesh, when the women brought them as their contribution to the building of the Tabernacle, at first Moshe did not want to receive them. But God told him to take those mirrors because it was due to them that the mirror merited being fruitful and multiplying and the whole birth of the Jewish people was thanks to these mirrors. Once more, God said that these were the most cherished part of the Tabernacle out of which the wash basin was made.²³ Just as these mirrors brought together husband and wife under the terrible servitude of Egypt, so in the future, waters brought from the wash basin were used to make peace and bring together again a husband and his wife who he suspected of infidelity.²⁴

On a daily basis, the basin was used by the priests to sanctify their hands and feet before serving in the Tabernacle.

²². Actually, in the phrase "He is in victory, she is in thanksgiving," the two *sefirot* of victory and thanksgiving are actually the male and female parts of the intellect of the *nukva*, the feminine, meaning that the feminine wisdom is victory and the feminine understanding is thanksgiving. These two *sefirot* together serve to construct the *partzuf* of the feminine figure, which is the *nukva* of *ze'er anpin*, the *malchut* (kingdom).

□. אלו חביבין עלי מן הכל

²⁴. See Numbers 5:11-31. Contrary to some interpretations, the main reason for using the technique described therein is to make peace between a husband and his wife.

To do so, the priest would place his right hand on his left foot and his left hand on his right foot and pour water from the basin on all four together. If he did not wash himself in this way, then his entire service was disqualified.

So from these two instances, we see that the basin is a symbol of connecting left and right together. The right hand and the left foot were unified, then the left hand and the right foot were unified, and then all four were washed together.

In Kabbalah, each of the different vessels of the Tabernacle correspond to a particular sefirah. The basin and its base correspond to the *sefirot* of victory and thanksgiving. In fact the word "צבאות" is also the holy Name of God, the God of Hosts, which corresponds to the *sefirot* of victory and thanksgiving.²⁵ This we refer to as mirror symmetry.

A Torah Insight Into Parity Conservation

Before, in regard to our discussion of the equivalence principle (that gravity and acceleration are equivalent) we saw that the Torah offers us an additional insight. Here we also see a similar innovative insight. When the husband and wife looked in the mirror they were the same except that their position changed. It is interesting to ask, when is mirror symmetry most apparent in Jewish life? Let us think about the bride and groom standing under the *chupah*, the wedding canopy. Who stands on the right and who stands on the left? According to the prevailing custom, we place the bride to the right of the groom.²⁶ Why should that be? The feminine (in this case, thanksgiving) should be to the left and the masculine (in this case, victory) should be to the right. But, in relation to the Rabbi who is sanctifying the couple, relative to him, it is the opposite. For him the groom is to his right and the bride is to his left. This is a very simple way to explain how left and right interchange, it is still the same universe; the same two people are getting married whether I look at it from their perspective or from the perspective of the Rabbi.

Now, surprisingly, when the husband and his wife looked in the mirror together, the mirror acted. The mirror image was not passive. The mirror image was active. First of all it connected them together. The husband and the wife are sitting together on a bench and the husband is about to fall asleep because he is so tired from his work, there is no connection between them. All of

²⁵. See *What You Need to Know About Kabbalah*, pp. 152-3.

²⁶. See *Nitei Gavri'el - Hilchot Nissu'in Part 1*, p. 129, notes 21 and 22.

a sudden the wife takes out her mirror and says to her husband "Let's look in the mirror." And then something new happens, by seeing themselves together, the husband is aroused, etc. And once again, the Almighty said that this is the most beloved of all the contributions to the Tabernacle. So the symmetry made the husband take initiative and made him interested in his wife. This means that the symmetry awakened in him his power of victory. About the female it says that "understanding extends up to thanksgiving." This is the perseverance that we spoke of earlier. And with this power of thanksgiving, of perseverance, the wife was now entrusted with the responsibility of carrying the pregnancy through to its term. But, the arousal of victory was achieved by the symmetry.

So, we have seen how parity symmetry, the conservation of parity, is related to victory and thanksgiving.

Charge and the Emotional Sefirot

Let us now turn to charge symmetry. Charge symmetry is the symmetry of the essential emotions of the heart. A person is charged, everybody is charged. To be charged is to have an emotion, an emotion is a charge.

Now, the here is the amazing thing about emotions. Imagine two people, one who is all love and one who is all fear or awe. Now imagine that they switch. If all the lovers became fearers and all the fearers became lovers, the universe would remain exactly the same; meaning, that in a certain sense, it makes no difference. "These and these are the words of living God."²⁷

In the terminology of Kabbalah, charge symmetry is called *chasadim* (attributes of loving-kindness) and *gevurot* (attributes of judgment). The *sefirah* of knowledge is the origin of both loving-kindness and might, or fear. In the *sefirah* of knowledge are both aspects of loving-kindness and aspects of judgment, which when manifest in the heart become the two *sefirot* of loving-kindness and might, which are experienced as love and fear. In Kabbalah there is a description for when they interchange: *אחליפו דוכתייהו*,²⁸ which means "they change places."

What happens in such a case is that the light of loving-kindness enters into the vessel of might and the light of might enters into the vessel of loving-kindness. This is to be experienced every day when we read the first and second paragraphs of the *Shma*, as explained in the intentions of the Arizal. The first paragraph, which begins with the words "And you

²⁷ אלו ואלו דברי אלקים חיים .

²⁸ . אחליפו דוכתייהו . See ???

shall love *Havayah*, your God...," is the paragraph of love. But, the Divine Name that gives it light is the Name of 42 letters,²⁹ which is associated with *gevurah*, with might/fear. The Tzemach Tzedek, explains that this is because the light of *gevurah*, of awe has entered into the vessel of loving-kindness. The second paragraph is the opposite, the Name of 72, which is associated with loving-kindness enters into the vessel of might.³⁰ So what takes place when we say the *Shma* twice every day is a charge symmetry phenomenon, which is called *achlifu duchtayhu*. What this means for each of us individually, is that we should remain open to a total metamorphosis or change, but that things will still remain symmetric.

For example, if I know someone who has only fear, then the easiest way to give him an experience of love is if I assume a state of fear. If I do so, he will take on love. Charge symmetry will ensure that everything remains the same, but as we mentioned above, there is something better about the symmetric state than the original state.

The best example of charge symmetry taking place in the Torah is found in the story of the binding of Isaac. Abraham who was loving-kindness acted with might, and Isaac who was might, acted with loving-kindness (by lovingly accepting his father's judgment).

On a deeper level, we can say the same thing regarding the good and bad inclinations. It is explained in Chassidut that the good and bad inclinations (*yetzer hatov* and *yetzer hara*) derive from the *chasadim* (the aspects of loving-kindness) and the *gevurot* (the aspects of judgment) of knowledge. What happens if throughout the universe they switch? This would also be charge symmetry. Inclination is an emotion, a charge, it is a drive. Just like an electron has a charge and there is a positron with an opposite charge. Understanding that the state resulting from such a switch of all the good and bad inclinations in the universe would, on the whole, leave the universe unchanged is very profound. Very often, people think that they are doing good but they are doing bad. Other people may think that they are doing bad, but they are really doing good. This is much more subtle. But this too is an example of charge symmetry.

(What it really boils down to is that the universe remains unchanged. Based on the verse, "And Noah found grace in the eyes

²⁹. As it contains 42 words.

³⁰. As in the previous case, this too is based on the number of words in the second paragraph. However, there are more than 72 words in the second paragraph. Explains the Arizal, that the 72nd word **ושמתם**, is the last word that indicates a state of might.

of God," we can say that symmetry (grace) is the beauty of creation.)

We saw such an instance of good and evil being reversed in the previous example regarding the mirrors that made up the wash basin. Moshe thought that the mirrors came from a bad inclination (they were used for sexual arousal). But, God revealed to him that the opposite was true, they were from the good inclination, used to ensure Jewish survival. Thus, the previous example of parity conservation can be used to explain charge symmetry. For Moshe, the good inclination was that there should not be sexual arousal, which is the bad inclination. But, for God this was the good inclination. This is very strange since in general we are taught that Moshe sees things from God's perspective.³¹ But, here we see that he sees things opposite.

As we said, parity symmetry, the weak force was considered a loophole. Still scientists thought that charge symmetry hold universally. But, then it was found that charge symmetry also has a loophole. Then it was thought that parity and charge symmetry hold when taken together. But, finally it was found that only when all three symmetries taken together does universal symmetry hold. Essentially it all depends on time symmetry.

Time and the Intellectual Sefirot

So now let us explain time symmetry and how it corresponds to the intellectual faculties of the soul called *chabad*, which stands for the three *sefirot chochmah* (wisdom), *binah* (understanding), and *da'at* (knowledge).

In *Sefer Yetzirah* (the Book of Formation), it states that the depth of beginning (*omek reishet*, meaning the past) corresponds to wisdom and that the depth of the end (*omek acharit*, meaning the future) corresponds to understanding. What this means is that knowledge corresponds to the present. So the direction of time is from wisdom to understanding, from the past to the future. This means that knowledge corresponds to the present, which is in between the two. Before we said that relative to one another the origin of space is in understanding, while the origin of time is in wisdom. This still fits, since time is still in wisdom, but it is moving towards understanding. The classic example of this is that time has today with the word *איתן*, which is made up of the

³¹. As explained in Chassidut regarding the verse, "And he [Moshe] sees the vision of God" (ותמונת הוי' ביט), Numbers 12:8). Moshe sees the same vision of reality that God sees, meaning he sees things from God's perspective.

letters that in Hebrew are used to form the future tense.³² For example: **אהיה יהיה תהיה נהיה**, which mean: I will be, he will be, you will be, we will be, all in future tense. These letters indicate a vector force of the time coordinate from the origin of time to the end of time, which corresponds to understanding.

So time symmetry means that if the direction of time would reverse than time would flow from mother to father, but because of entropy, the universe would still look the same. The past would still be experienced as the past even though it was not the future, all due to the second law of thermodynamics, the law of entropy.

A Shma Meditation on Symmetry

Now we will relate all of this to the word *echad* (אחד), meaning "one." We mention this word in the first verse of the *Shma*: שמע אחד ישראל ה' אלקינו ה' אחד. The word *echad* (אחד) has three letters. There is a basic meditation that we are taught in the *Shulchan Aruch* regarding this word. The first letter, א, alludes to the essence of God. Since I cannot know the essence of God there is little to meditate upon, so I say this letter quickly, without dwelling on it.³³ A little bit of meditation on the ח. And the mitzvah to draw out the pronunciation of this word is specifically on the ט of אחד. What is the significance of these three letters? The ח represents the up-down dimension of reality, which includes 8 dimensions: the seven firmaments and the earth. The ט represents the four lateral directions of the earth itself. The א is the root, meaning the soul as it is one with God, before its descent through the seven firmaments to the earth, where it is given the task of spreading the knowledge and light of God within the four lateral directions of the earth to reach the four corners of the earth. This is a simple meditation on the word אחד. We cannot conceive of the true unity of the soul with God so the א is said quickly, without much meditation on it. The true meditation begins with the experience of descending through the seven firmaments and the earth. By which we can then come to understand our mission in life of spreading knowledge of God through the four corners of the earth, ופרצת ימה וקדמה צפונה ונגבה. This verse

³². When permuted, these four letters spell the word "Tanya" (תניא). This was one of the reasons that the Alter Rebbe chose this word to begin his classic work of Chassidut. The word איתן, *eitan* also alludes to the essential strength of character of the Jewish soul (for which reason, Abraham was called "Eitan Ha'ezrachi," see I Kings 5:11 and Psalms 89:1; see in length in *The Art of Education*, pp. ???).

³³. *Shulchan Aruch Orach Chayim* 61:8.

literally means giving birth to many, many souls throughout the world, like the "mirrors of hosts," mentioned before. This is also the literal meaning of the verse "יפוצו מעינותיך חוצה," "May your wellsprings spread out," i.e., to have many children who will spread around the world and inhabit it and bring God's light to it. In any event there are three physical dimensions.

When we will speak about String Theory, we will see that it adds many more spatial dimensions. For some reason that we cannot explain they add only physical dimensions, they do not add a time dimension. When you talk about charge it is not a spatial dimension. Time is certainly not a spatial dimension. Nonetheless, both time and charge project themselves upon one of the three spatial dimensions.

Time is reflected in depth. Depth is called the third dimension, like 3d which is in and out or front and back. How do I know that time is reflected in the front-back spatial dimension? We are talking about how time unites with space and we are asking whether time unites with space in a particular manner. From a spiritual perspective, we say that time specifically unites with the front-back dimension of space. We know this because the Hebrew words for front and back are פנים and אחור, which stem from the same root that means "before" (לפני) and "after" (אחרי). But, amazingly, the word for earlier time, meaning the past (לפני) means "front" and the word for later time, meaning the future (אחרי) means "back."³⁴ So we have here an amazing example of direction reversal similar to what we discussed before regarding the symmetry of changing the direction of the flow of time. What was the past is not the future, what was the future has now become the past.

Parity, describes left-right symmetry, they correspond to the lateral directions. These are the four directions of the τ of אחד. The in-out (פנים ואחור) or אחור וקדם צרתי, both of which indicate the past (קדם is more primordial of פנים). Parity again is right and left, and more generally it is the τ . Let us go back for a moment. We said that parity reflects the *sefirot* of *netzach* (victory) and *hod* (thanksgiving), they are called two "sides" of the body. This is like "taking sides." *Netzach* and *hod* are two sides. Side in English derives etymologically from the word צד (tzad) in Hebrew. Even though they are only two sides they correspond to all four lateral directions.

³⁴. This seems to be true in English as well, where "aft," the source of "after" (indicating the future), also means the back side, while "fore," the source of "before" (indicating the past), also means the front side.

Spatially, charge corresponds to the up-down dimension. Scientists cannot explain why they chose these strange words, but the charge on quarks, which give them their names are "up" or "down," or "top" or "bottom" (this means that "charm" and "strange," the two remaining quarks, also follow this indeed strange convention—charm is up and strange is down). The terminology of up-down especially applies to the statement in *Sefer Yetzirah* (the Book of Formation): "There is no good higher than pleasure (*oneg*) and no evil lower than a plague (*nega*)."³⁵

Once more, we started with the five *chasadim* and five *gevurot*. They are either love or fear, or even more extremely the good and evil inclinations. But really what this applies to is up-down as good rises all the way up to *oneg* and evil descends all the way down to *nega*. In any event, charge abstractly means that either you are charged "up" or "down." But, the amazing thing is that it does not matter in which way you are charged, because if the entire universe were to switch we would not be able to tell the difference. Like we said before, sometimes you have to change your own charge in order to bring out the opposite in someone else. So now we have that there is a mysterious projection of charge upon the η of אחד.

Now, time affects the \aleph of אחד. What does it mean for a Jew to be moving towards the past and yet to always experience it as the past? We mentioned already that this is the most profound of symmetries. It is the most intellectual one. It means that just like God, a Jew is always looking at the Torah as the blueprint of creation, the blueprint that God used to create the world.³⁶ The Jew is always looking at the past, at what the Torah has to say. Every day a Jew re-experiences the giving of the Torah. As he is moving forward through time he is actually looking at the past and basing his entire life on what he knows to be the past, but somehow this is now also the future, since from his perspective he is always moving forward in time. Again, just like the Creator, by looking at the Torah—both the primordial Torah with which the world was created and especially the Torah that was given to us at Mt. Sinai—the Jew creates a world, creating and forming his future.

Indeed, in Zachariah there is a vision where he sees the Torah as having a front and a back. Its called the flying scroll of the Torah.

³⁵ . . אין בטוב למעלה מענג, אין ברע למטה מנגע.

³⁶ . אסתכל באורייתא וברא עלמא.

The Gematria of Symmetry and Unity

We will conclude this lecture with the following very beautiful expression. We saw that in the word אחד, the א corresponds to the intellect, the ה to the emotions, and the ד to the spreading out in actions.

In Kabbalah we are taught that every word can be written in a symmetrical form. Practically, the only way we can imagine symmetry is like a mirror. There is no other model that we have for thinking about symmetry. In the Shema as it is written in the Torah, the word אחד ("one") has a large letter ד. Now if I take the ד as a axis of symmetry and write out the word I will get: אה אהד. Now, instead of equaling 13 (אחד), it equals 22.

Now, what will happen if we do this not in one but in three dimensions?

א				א
	ה		ה	
א	ה	ד	ה	א
	ה		ה	
ד				א

The value is easy to compute as אה is equal to 9, and since we now have 6 times אה, the total value will be 54 plus the value of the ד, 4. So, altogether אחד in three-dimensional symmetry is equal to 58 = אה.

A much simpler finding is that in small numbering אה is equal to 13! While, as we saw, in three dimensions, אחד = 13, expands to equal אה.